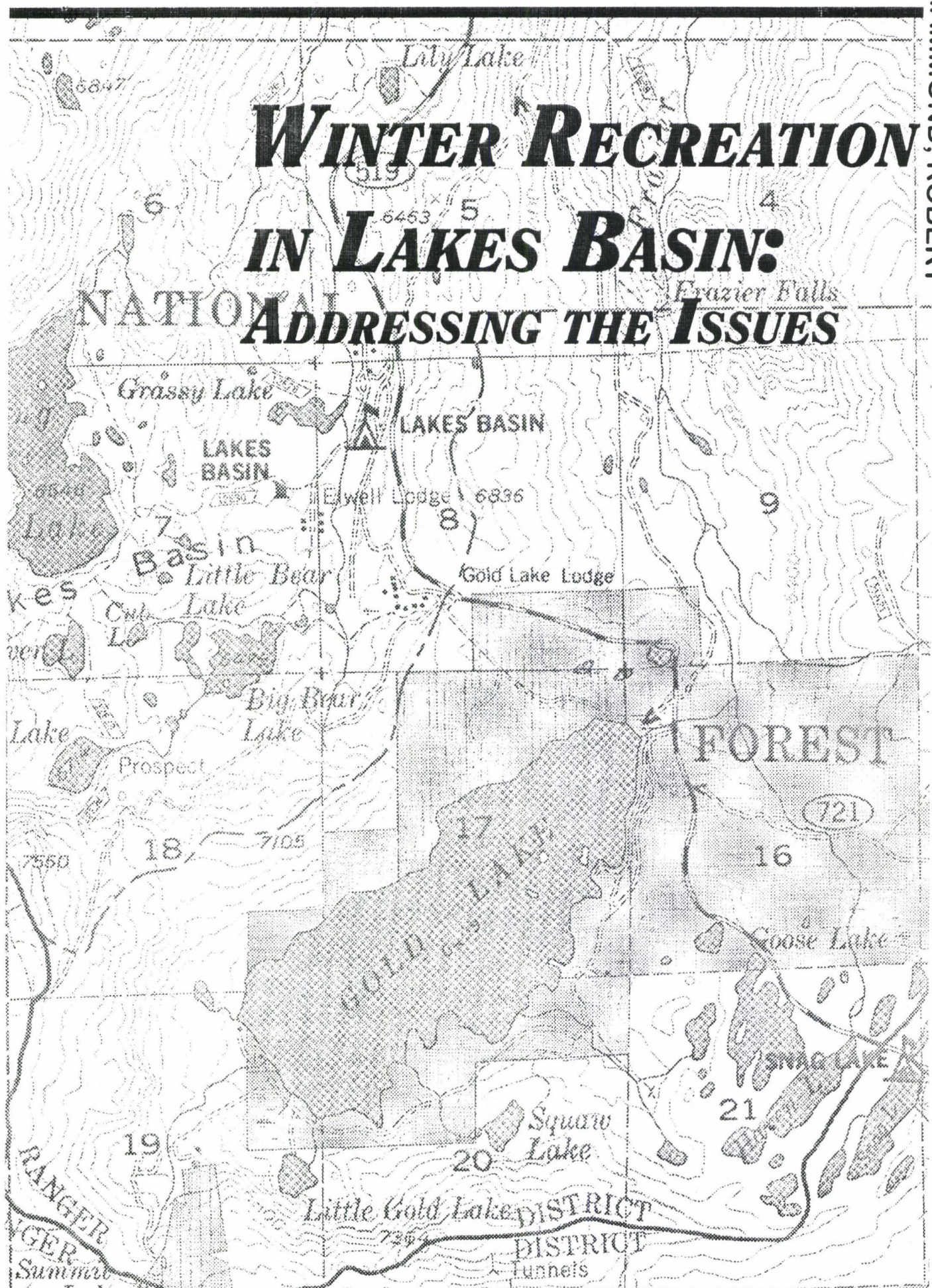


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HAMMOND, ROBERT

# WINTER RECREATION IN LAKES BASIN: ADDRESSING THE ISSUES





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# ***WINTER RECREATION IN LAKES BASIN: ADDRESSING THE ISSUES***

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I am grateful to Mary Coulombe, Plumas National Forest Supervisor, and John Palmer, Deputy Forest Supervisor, who provided me with the opportunity to attend the Outdoor Recreation Management Short Course; Dave Peters, Recreation Staff Officer, and Ron Hodgson, Professor - Cal State University at Chico for their assistance in design of the questionnaire and especially Ron Hodgson for ideas on interpretation and display of the data.

The development of a meaningful proposal would not have been possible without the dedication of representatives of the visitor groups who use the area. Ed Zimmerman, John Preschutti, Patrick Welch, Eileen Richmond, and Sean O'Brian committed a significant amount of their personal time and energy to this project; they have my sincere appreciation.

Finally, I would like to thank Gina McCellan, Clemson University Short Course program Director for conducting a "First Rate" program.

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## ABSTRACT

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### Winter Recreation in Lakes Basin: Addressing the Issues

Historically, recreation resource management plans have included only limited involvement of visitors who will be enjoying the values of the area. Consequently, facilities were sometimes provided which were unwanted, unnecessary, or in the wrong place; occasionally, the management philosophy was also inappropriate.

The Plumas National Forest has an opportunity to improve the quality of winter recreational opportunities and individual experiences in the Lakes Basin area by inviting visitor participation in the development of proposed improvements and management strategies.

This project addresses the needs of both the cross-country skiers and over-the-snow vehicle (O.S.V.) users who recreate in a portion of the 11,900 acre Lakes Basin area. The issues range from lack of adequate improvements to conflicts between the two groups. The conflicts range from skiers not experiencing the solitude they anticipated and alleged harassment by O.S.V. users to O.S.V. users complaining that the skiers will not move out of their track when they need to pass.

A visitor survey conducted in February of 1990 provides an insight into why people come to the area, what facilities they use, and what facilities they want. A six member planning team, comprised of local skiers and O.S.V. users as well as Forest Service personnel addressed the issues and concerns, created a proposed implementation plan which is responsive to the survey data and compliments the natural values of the area.



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## VICINITY MAP



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## TABLE OF CONTENTS

Acknowledgments .....	ii
Abstract .....	iii
Vicinity Map .....	iv
Executive Summary .....	vi
Introduction .....	1
Statement of Problem .....	1
Purpose and Objectives .....	2
Basic Assumptions .....	2
Literature Review .....	3
Procedures .....	5
Subject Population.....	5
Design of Survey Questionnaire .....	5
Collection of Data .....	5
Response to Questionnaire .....	6
Evaluation of Data .....	6
Analysis of Data .....	8
Visitor Characteristics .....	8
Area Attraction .....	9
Preference for Improvements .....	10
Preferred Activities.....	13
Management Preference .....	14
Project Design .....	16
Summary and Conclusions .....	20
Summary of Procedures and Findings .....	20
Conclusions .....	21
Discussion and Implications .....	21
Recommendations .....	21
Monitoring .....	22
References .....	23
Appendices .....	25



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## EXECUTIVE SUMMARY

**TITLE** Winter Recreation in Lakes Basin  
Addressing the Issues

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**SUMMARY** This project focuses on addressing the needs of both the cross-country skiers and over-the-snow vehicle (O.S.V.) users who recreate in a portion of the Lakes Basin Recreation area. The current issues we face focus on conflicts between the two visitor groups and the lack of reasonable improvements to support their activities.

*There were two objectives of this project:*

1. To acquire information about visitor preferences and needs.
2. To develop an implementation strategy which would meet these needs.

*The situation was approached in a two-fold manner:*

1. A survey was created to gather information on visitor preferences, needs and ideas.
2. A team was assembled to develop an implementable plan for the area based upon the information gathered in the survey and the collective knowledge they as individuals possessed. The team was composed of Forest Service personnel and representatives of the two primary visitor groups.

The results from the survey clearly showed a preference for developing and revamping certain improvements in the area while maintaining the key attributes which attracted them to the area in the first place. The desired improvements were: improved parking with restrooms and a warming area, groomed and ungroomed O.S.V. trails, a map of the area, additional restrooms, and groomed ski trails. The intrinsic values of the area which were most important were scenic quality and the open, uncrowded feeling of the area.

The team developed an alternative which addressed the issues and ideas gathered with the survey. The recommendations are appropriate, focused on the issues, and implementable. Table D and Map 1 clearly display the team proposal. The implementation strategy is based on developing partnerships with various agencies and visitor groups; the strategy will not be a success if partnerships are not developed.

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## INTRODUCTION

The Lakes Basin Recreation area was established by the Secretary of Agriculture in 1926. The Area was to be used for recreational purposes and other uses were not to impair the recreational values. Three contiguous areas were added to the original Area in the land management planning process for the Forest. The Area is now 11,900 acres. The natural beauty of the area is unsurpassed. Glacial action has resulted in steep "U" shaped canyons to rolling glacial moraines with 20 plus lakes and numerous snow ponds.

The Land Management plan focuses almost exclusively on summer recreational activities and improvements to support those activities. The only reference in the Plan towards winter activities is to "allow motorized over-the-snow travel but consider restricting to designated areas if conflicts develop with other uses or resources."

Visitors should have the opportunity to obtain a recreational experience which meets their needs. Meeting these needs should be the goal of all agency managers involved in management of areas with recreational opportunities. To accomplish this goal, managers must clearly understand the needs and desires of the visitors.

Having appropriate improvements can be as important a part of meeting visitor needs as is the management philosophy the agency follows. With rising costs and limited dollars available, the manager must decide which improvements should be developed to provide a quality experience for a broad spectrum of visitors.

Effective visitor participation in the planning process is essential in situations where conflicting recreational uses must be accommodated on the same land base.

### STATEMENT OF PROBLEM

As the number of visitors to the Lakes Basin area has increased, so has the number of incidents occurring between cross-country skiers and individuals using O.S.V.'s. Complaints range from skiers not having the solitude they seek or being harassed by O.S.V. users to skiers being unwilling to move out of the track to allow O.S.V.'s to pass. The number of complaints received each season continues to increase. The majority of the complaints are from the cross-country skiers, although a few have been received from O.S.V. visitors. It is apparent that now is the time to make adjustments in the way the area is managed. It is also apparent there is a need for improvement of some existing facilities and addition of others to support a range of winter recreational activities in the area.



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## **PURPOSE AND OBJECTIVES**

The purpose of this project is twofold:

1. To acquire information about Lakes Basin visitor preferences and needs.
2. To develop an implementation strategy to best meet the needs and concerns identified by visitors within reasonable funding constraints.

*This project has eight objectives. They are:*

1. Perform a literature search on visitor preferences for winter recreation facilities and why people recreate.
2. Perform a literature search on various survey techniques to gather information on visitor preferences.
3. Complete a literature search on techniques and processes to obtain effective public involvement and gain consent for change in management of the area.
4. Develop and conduct a survey of Lakes Basin winter visitors to understand their preferences.
5. Analyze the survey data gathered.
6. Organize a team of individuals from both visitor groups to evaluate the survey information and develop an implementable proposal which addresses the issues, concerns and opportunities.
7. Document the project with this paper.
8. Present this proposal to the Forest Leadership Team and propose that the recommendations be pursued.

## **BASIC ASSUMPTIONS**

*Three assumptions were made for the purposes of this paper. They are:*

1. Lakes Basin winter visitors know reasonably well what their improvement preferences are.
2. There will be no significant changes in visitor preferences prior to the next Land Management Plan update.

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## LITERATURE REVIEW

This project required an understanding of three concepts: user preferences, survey techniques and interpretation, and group dynamics in decision making.

A literature search of user preferences revealed that preference is a function of experience. With a limited background of recreational experiences, visitors tend to have very focused preferences. Because past experiences may have been highly variable, preferences can also be highly variable. It is important, therefore, to acquire site-specific information about user preferences if appropriate decisions are to be made. Intuitive decisions may be inappropriate when managing for needs of several recreating publics. The following publications provided information about visitor preferences:

1. Smith and Theburge (1987)
2. Chilman and Hampton (1980)
3. Stankey (1975)
4. Hatry and Dunn (1971)

The second portion of the literature search studied the mechanics of visitor survey design and implementation. Survey models for obtaining site-specific information were unavailable in the literature reviewed. It was necessary to design a survey model for the Lakes Basin area. The following publications provided information on selecting the most effective survey format. They also discussed methods for obtaining, analyzing, formatting, and displaying the data gathered.

1. Meyers and Shelton (1980)
2. Dilman (1978)
3. Bartholomew (1963)
4. Erdos (1957)

The third segment of the literature search dealt with understanding the dynamics of group interaction and developing of decisions which would be accepted by the public. The following publications provided an insight into the various techniques which are available and recommendations on application.

1. Thissen, Wil A., Andrew P. Sage, and John N. Warfield (1980)
2. Fordyce, Jack K. and Raymond Wil (1979)
3. Francis, Dave and Don Young (1979)
4. Dyer, William G. (1977)
5. Doyle, Michael and David Strauss (1976)



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**PERSONAL CONTACTS** Individuals with survey experience were contacted to discuss proposed methods and objectives. Suggestions on survey design were also solicited. Contacts included a social science research specialist and Forest Service staff officers.

1. Hodgson, Ronald
2. Peters, David
3. Hammond, Kathy

Others were contacted, but because the conversations were more general in nature, they are listed in the bibliography section of this paper.

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## **PROCEDURES**

The process of sending a questionnaire to prospective respondents, getting them to complete the questionnaire in an honest manner, and to return it can be viewed as a "social exchange" (Dilman 1978).

**SUBJECT POPULATION** A sample population of 100 visitors and 15 potentially affected businesses were provided with copies of this survey. The sample population met the general conditions discussed by researchers whose work was reviewed. Only persons who had previously visited or were visiting the area were sampled (Chilman and Hampton, 1980).

The method used to select potential respondees was a stratified random sample. The survey forms were color coded for each group to be sampled. Fifty yellow surveys were given to O.S.V. visitors; 50 blue surveys to cross-country skiers; and 15 green surveys to potentially affected businesses in the area. This size of sample was fully acceptable as the variability of those to be sampled was reduced and uniformity increased by stratifying the populations (Myers and Shelton, 1980).

**DESIGN OF SURVEY QUESTIONNAIRE** A "self-mailer" survey questionnaire (Appendix B) was used to acquire data from visitors and potentially affected businesses concerning their recreational experiences and preferences in the Lakes Basin area. A short informal note was attached to each questionnaire as a reference for the respondee of what the project was about and how the information would be used (Appendix A). Several key points were considered in designing the questionnaire: the wording needed to be kept as simple as possible so each question would mean the same thing to everyone; the design of the first question was critical as it is more likely than any other to determine if the questionnaire goes in the mailbox or the garbage (Dilman, 1978). Recommendations on design of specific questions and format of the questionnaire were provided by several Plumas National Forest staff personnel and Dr. Ronald Hodgson. The questionnaire consisted of seven questions which are described below under Evaluation of Data.

Because of the nature of this project, statistical validity of the survey design and data collected was not evaluated.

**COLLECTION OF DATA** The survey was done during the months of January and February, 1990. The selection of the date to hand out questionnaires at the Graeagle parking area was a randomly selected Saturday when use was anticipated to be at a high level. Contacts were also made throughout the local area to determine what individuals and groups generally visited the area. It was discovered that persons using



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O.S.V.'s were generally organized into clubs or informal groups, while cross-country skiers tended to have no formal organization which complicated dissemination of the surveys.

Information was also gathered to determine the actual use occurring in the area by cross-country skiers and individuals on O.S.V.'s. Samples were taken on eight different days between January 27 and February 14, 1990. All sample days except one were on weekends. Sampling was done between 10:00 a.m. and 2:00 p.m. when the greatest number of visitors were in the area. The actual number of visitors was determined by direct contact or looking at the equipment with their vehicle and estimating the number of skiers and O.S.V.'s. Use by visitor group was: O.S.V.'s 82%, cross-country skiers 17%, and other <1%.

Those individuals who were personally contacted were very willing to participate in the survey and share their ideas.

#### **RESPONSE TO QUESTIONNAIRE**

The decision to respond or not is based on an overall subjective evaluation of the questionnaire (Dilman, 1978). Three things were done to maximize response: I clearly stated how the information would be used; I attempted to give the respondents the feeling that a proposal for management of the area would be completed which considered the information they provided; and, the cost of responding was minimized.

The number of questionnaires returned and the response are summarized below.

	Questionnaires Returned	Response Rate
Over-The-Snow Vehicle Group	34	68%
Cross -country Ski Group	23	46%
Local Business Group	11	73%

#### **EVALUATION OF DATA**

The data obtained from the survey was summarized by total response to each question. Some questions which had significant deviations between the responding groups were also summarized by visitor group. The information was then used to create the tables and figures in the Analysis section.

The responses from the seven survey questions were grouped into five categories:

1. User Characteristics
2. Area Attraction
3. Preferred Improvements

- 
4. Preferred Activities
  5. Management Philosophy

Frequency of area use and activity the visitor was engaged in were the only USER CHARACTERISTICS gathered. The information was determined from questions one and two. Visitor responses were segregated into three categories: infrequent (1 to 5 visits); moderate (6 to 15), and frequent (more than 15). The percentage in each category was then determined (Figure 1).

Question three, AREA ATTRACTIONS, was an open-ended question. Respondees were provided the opportunity to answer in their own words. A wide variety of responses were obtained. Similar responses were grouped and segregated into eleven categories (Table A).

Questions four and six were used to evaluate PREFERRED IMPROVEMENTS. Question four determined the current use and preference of use of existing facilities. These facilities are: vault toilets, end-of-road parking, groomed trails, snow covered roads, and snow covered trails. Percentages were used to compare which of the facilities received the most use. Question six provided the respondent the opportunity to identify which facilities they would prefer to use if available. Choices included all facilities in question four plus signed O.S.V. and cross-country ski trails, a map of the area, garbage disposal sites, overnight shelters, lodges for overnight and lodges for meals. Percentages were used to compare which of these facilities would receive the most use if they were in place and to show the visitor's preference (Figure 2, Table B, & Figure 3).

Question five evaluated PREFERRED ACTIVITIES. Visitors listed and ranked four activities they most often participated in or would like to participate in. Percentages were used to display the preferences for various activities (Table C).

The last question asked visitors to choose the type of MANAGEMENT PHILOSOPHY they preferred. The first choice was to continue with existing management (limited grooming, no signing, no restrictions) and to develop adequate parking.

The second choice was a limited level of improvement of facilities (some groomed and designated trails for both groups) with a minimal amount of restrictions on visitors.

The third choice was to restrict the use by O.S.V.'s (they would be limited to designated routes and areas).

Respondees were also provided with the opportunity to develop and present their own personal management philosophy.

Comparisons are shown in Figures 4 and 5.



## ANALYSIS OF DATA

Of the five categories analyzed, only preferred activities and preferred improvements allowed the visitor to set priorities of their choices. Some preferences, such as viewing the scenery, using O.S.V.'s, and adequate parking were consistently selected as the highest priorities.

### VISITOR CHARACTERISTICS

In response to whether they had visited the Lakes Basin area previously, 97 percent of the respondents said they had. About 13 percent of the respondents were infrequent visitors, 23 percent were moderate level visitors, and 62 percent were frequent visitors. Two percent of those surveyed were first-time visitors. (Figure 1).

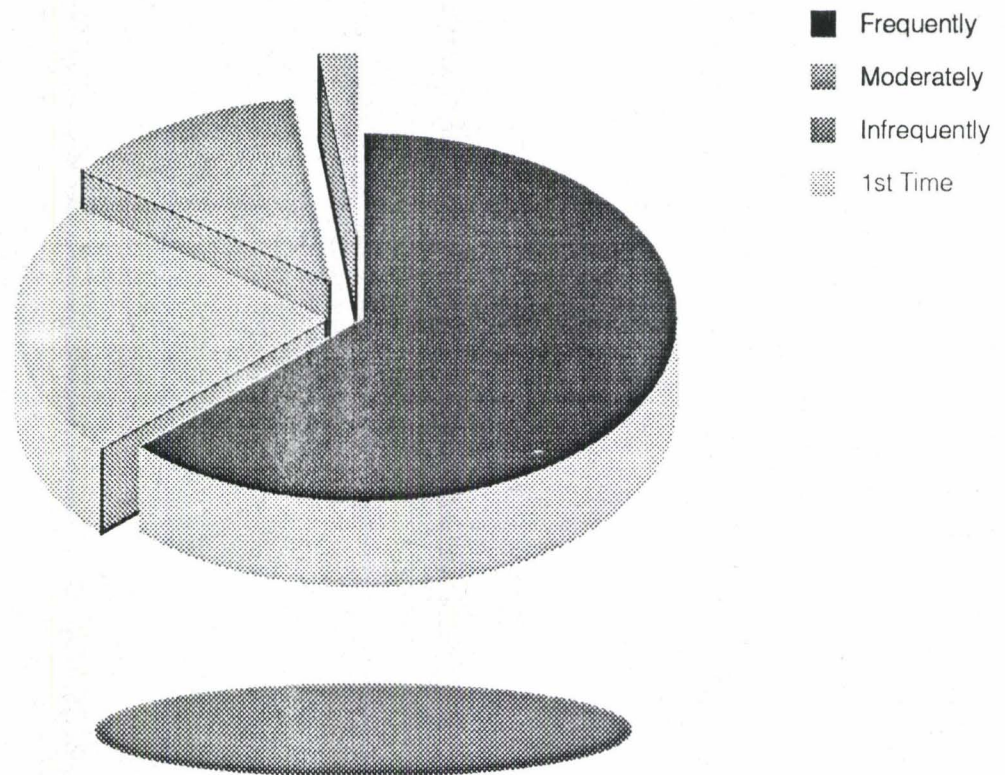


FIGURE ONE

How Many Times Have You Visited The Area

Frequently: greater than 15 visits  
Moderately: 6-15 visits  
Infrequently: 1-5 visits

Median = 31 visits

**AREA ATTRACTION** Five items appeared as primary attractions to all visitors to the area. They were, in order of frequency of response: scenic quality of the area; uncrowded opportunity; good snow conditions; and variety in terrain (Table A).

TABLE A. PRIMARY ATTRACTION OF THE AREA

Attraction	Total	Response by Visitor Group (%)		
		O.S.V.	X-C	Local Business
Scenic Quality	29	25	29	46
Uncrowded <sup>1</sup>	19	18	20	20
Good Snow	13	14	13	7
Variety of Terrain	13	9	16	20
Accessibility	10	9	16	0
Roads to Follow	4	9	0	0
Play/Relax	4	5	0	7
Groomed Trails	3	2	2	0
Backyard/Local	3	4	2	0
Lots to Do	3	5	0	0
Clean	1	0	1	0

<sup>1</sup> Other descriptions were: isolation, freedom, solitude, peaceful, open space, etc.



## PREFERENCE FOR IMPROVEMENTS

Figure 2 displays the current use of existing improvements by visitor group. When additional improvements were considered along with existing ones, six preferences dominated the results. They were, in order of preference, an adequate parking area (94%); a map of area (71%); signed, ungroomed O.S.V. trails (67%); groomed O.S.V. trails (60%); meals at lodges (59%); and additional restrooms (57%). Groomed cross-country ski trails (46%) were next in importance (Table B).

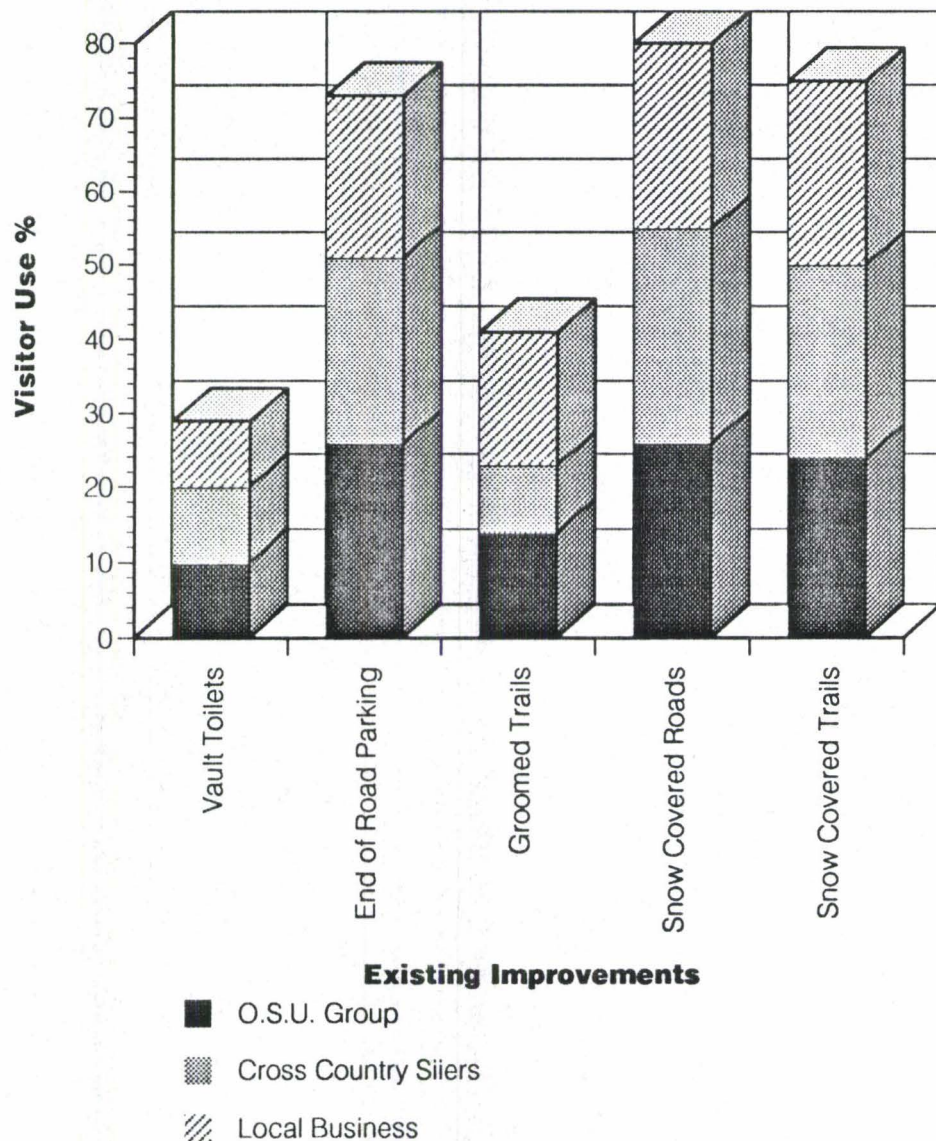


FIGURE TWO

Improvements Currently Being Used

Figure 3 displays the preference for and level of use of improvements by visitor group. When the data was disaggregated, the priorities for improvements preferred by each group was different than the summary of all responses.

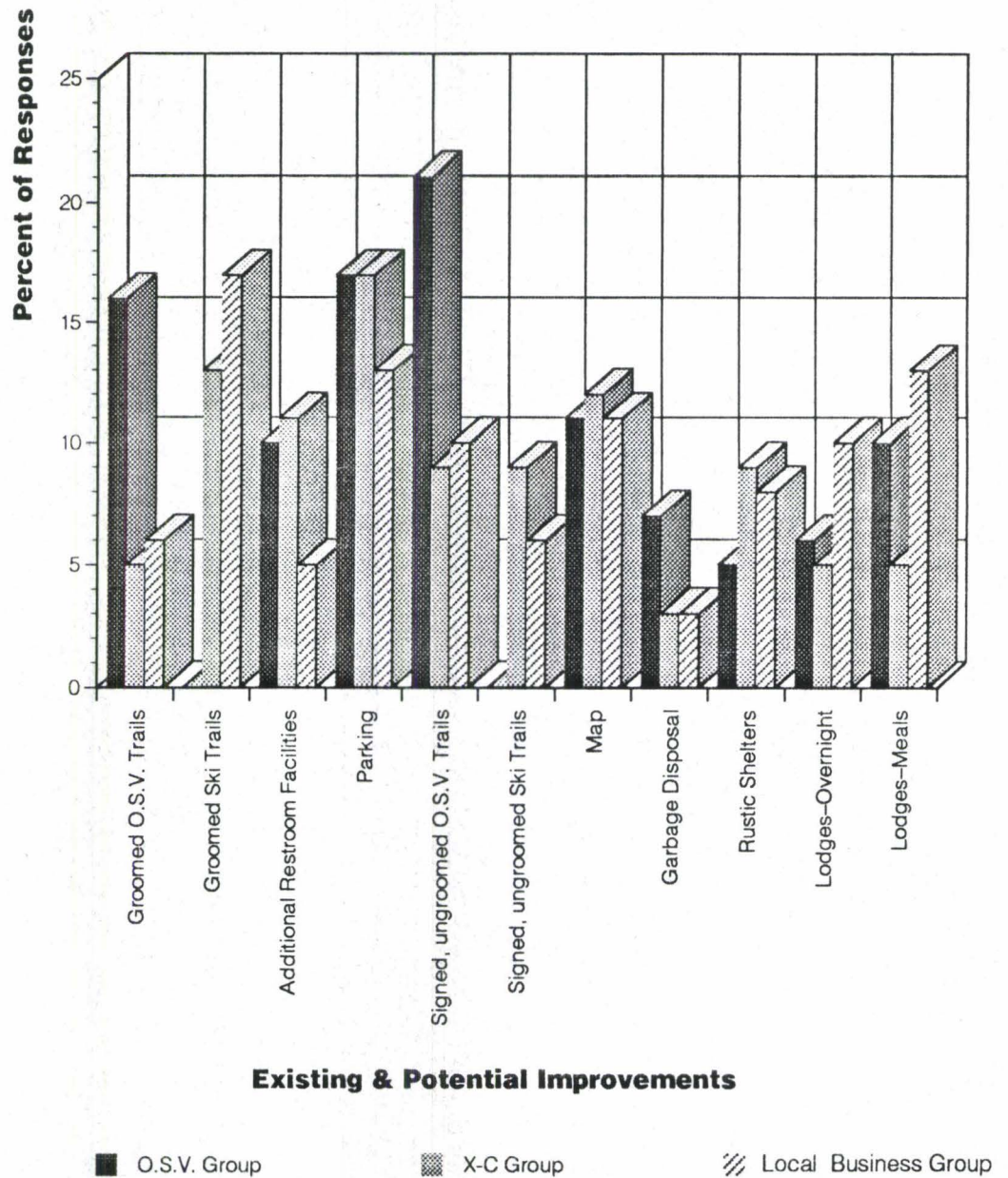


FIGURE THREE

Preference of Use by Visitor Group



TABLE B. PREFERENCE FOR ADDITIONAL IMPROVEMENTS

Facilities	Visitor's Priorities for Additional Facilities						Total
	1st	2nd	3rd	4th	5th	6th	
Parking Area	26	27	14	5	11	11	94
Map of Area	3	6	17	7	19	19	71
Signed, Ungroomed O.S.V. Trails	20	17	17	7	4	2	67
Groomed O.S.V. Trails	29	12	0	7	8	4	60
Lodges, Meals	0	2	9	18	11	19	59
Additional Restrooms	1	3	8	28	13	4	57
Groomed X-C Trails	9	16	5	5	2	9	46
Overnight Shelters	3	6	11	9	2	13	44
Lodges, Overnight	4	2	5	9	13	9	42
Garbage Disposal	0	2	5	2	13	11	33
Signed, Ungroomed X-C Trails	3	5	8	4	4	4	28
Other (No Change)	1	2	2	0	0	0	5

**PREFERRED ACTIVITIES** The majority of visitors to the area would like to engage in O.S.V. use (73%) or snow playing (73%). These activities were followed by cross-country skiing (52%), ice fishing (50%), and snow camping (48%). While participating in the activity of their choice, the data clearly shows they were enjoying the natural beauty of the area (92%), see Table C.

TABLE C: PREFERRED ACTIVITIES

Activity	Visitor Preference				Total
	1st	2nd	3rd	4th	
Viewing Scenery	0	43	29	20	92
Over Snow Vehicle Use	59	3	3	8	73
Snow Playing	0	19	25	29	73
Cross-country Skiing	39	9	2	2	52
Ice Fishing	2	10	20	18	50
Snow Camping	0	16	14	18	48
Snow Shoeing	0	0	5	4	9
Ice Skating	0	0	2	2	4



**MANAGEMENT  
PREFERENCE**

The final question provided the visitor with the opportunity to indicate their personal preference for a specific management philosophy. Three choices were offered: (1) Maintain the existing conditions and only add adequate parking; (2) Designate some routes for both groups and have the remaining area open to all; and (3) Restrict the O.S.V.'s to specific routes and areas. The preference by visitor group was slightly different than the summary response. Figure 4 displays the summary of all responses while Figure 5 displays the preference by visitor group.

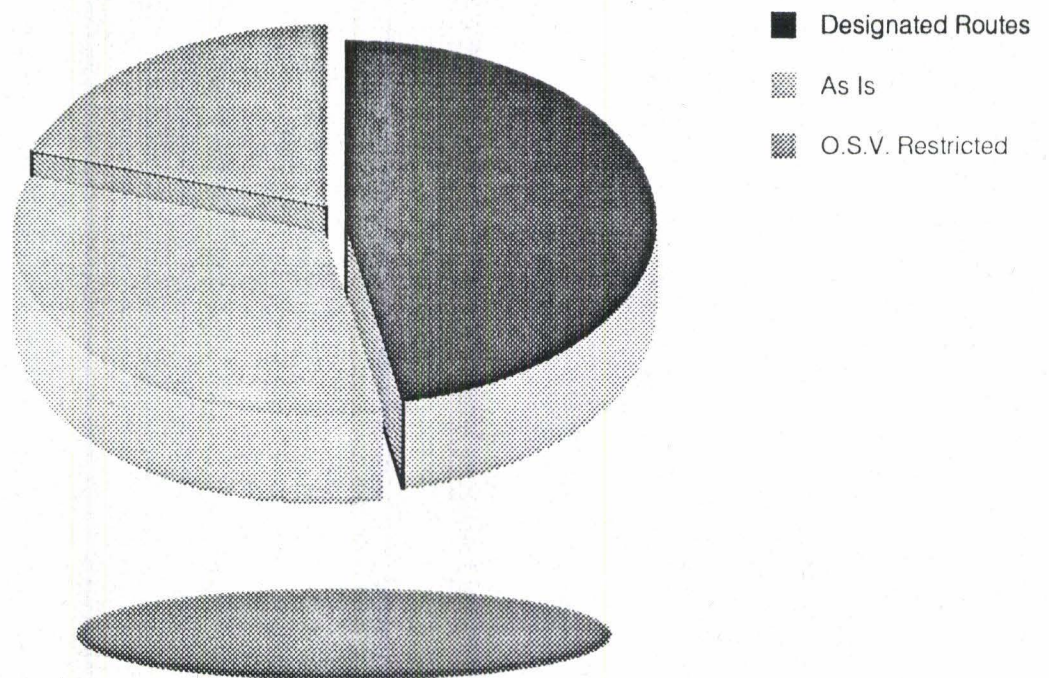


FIGURE FOUR  
Management Preference

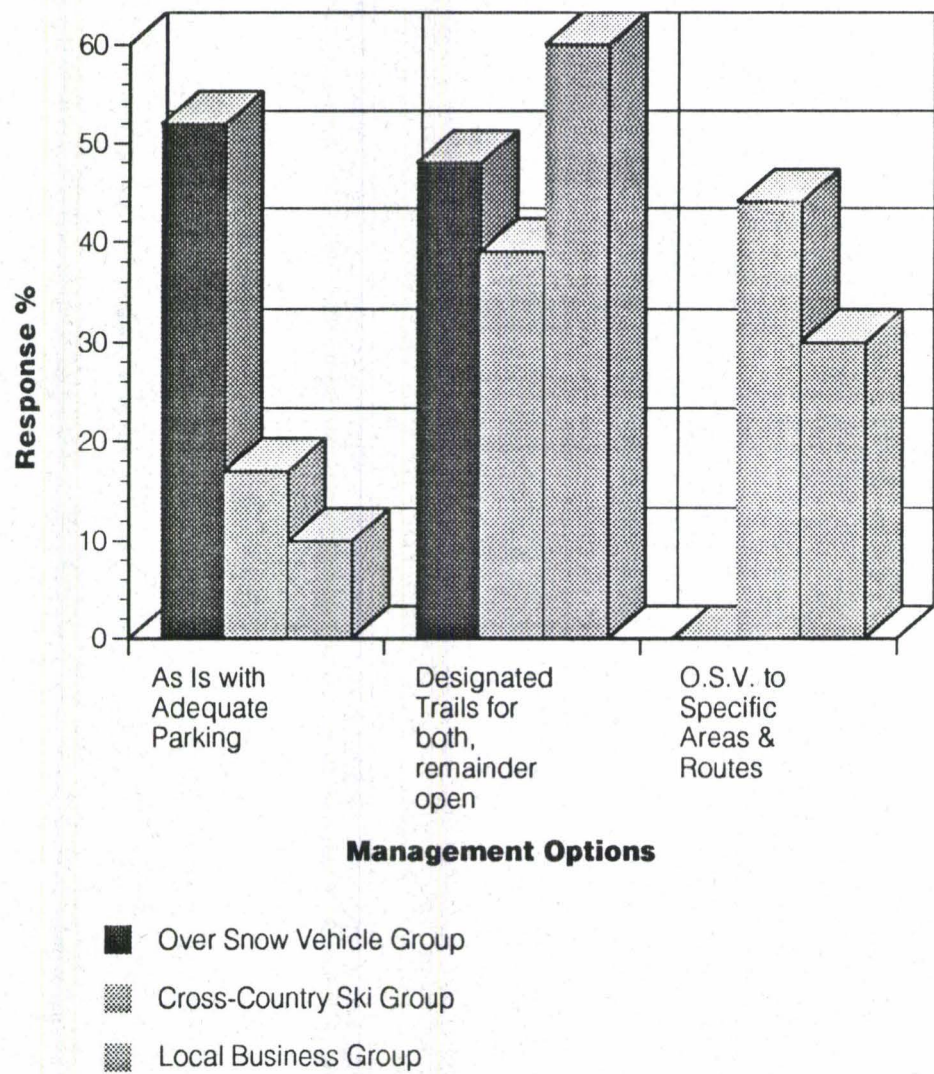


FIGURE 5  
Management Preference by Visitor Group



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## PROJECT DESIGN

Many theoretical projects would stop after the survey and development conclusions and recommendations based upon the data collected. I chose to carry the project forward to the point where a basic plan for implementation would be developed to address needs which were identified in the survey. The premise I worked with was if the proposal was to be a success then representatives of the visitor groups using the area would have to be involved in the development of the proposal.

The approach I chose was to form a team which would develop a site specific proposal. The group would work on the principle of developing a proposal based on the consent of all Team members. With this in mind, I selected a team of individuals which represented the over-the-snow vehicle and cross-country skier groups. The criteria I used in selecting the individuals were: knowledge of the area; actively involved in the sport they were to represent; the willingness to share ideas and concerns with others; and the willingness to work toward the development of a proposal which would require some compromise.

The group was comprised of myself and the following individuals:

- |                        |   |
|------------------------|---|
| <b>ED ZIMMERMAN</b>    | Auto Mechanic<br>Plumas National Forest & O.S.V. Enthusiast<br>Quincy, California   |
| <b>JOHN PRESCHUTTI</b> | Potter and Environmentalist<br>Dedicated Cross-country Skier<br>Blairsden, California   |
| <b>PATRICK WELCH</b>   | Timber Faller<br>Cross-country Ski Guide<br>Calpine, California   |
| <b>EILEEN RICHMOND</b> | Recreation Planner<br>Beckwourth Ranger District, Plumas National Forest<br>Cross-country Ski Enthusiast<br>Meadow Valley, California |
| <b>SEAN O'BRIEN</b>    | Businessman<br>Representative of Snow Busters O.S.V. Club<br>Reno, Nevada   |

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We met two different evenings. At the first meeting: I reviewed the objectives of the project and outlined the process and expectations; each person shared issues, concerns, ideas, and information they believed was relevant to clearly understanding the current situation in the project area. The expectations for the second meeting were discussed before adjourning. Each team member was asked to discuss the project with other individuals to gather as much information as feasible before the second meeting.

Between the first and second meetings, each team member was provided with a summary of the information shared by all at the first meeting, preliminary results of the survey, and maps on which they could display their proposal.

At the second meeting each person presented what they believed was a reasonable alternative that addressed the concerns which had been identified in the survey and at the previous meeting. After the presentations, a period of time was set aside so team members could discuss the various proposals in a more informal setting. We then regrouped and identified the pieces in each alternative upon which there appeared to be general agreement. The team then looked at other alternatives which were presented and considered if they should be included in the proposal to address the issues and concerns previously identified. The group considered, discussed, included, rejected, and modified segments of the individual proposals. The team's effort resulted in an implementation strategy which addresses the major opportunities and issues identified in the survey and by team members, yet imposes only limited restrictions to the visitor groups that use the area (Map 1).

TABLE D summarizes the various elements of the strategy developed by the Team.



**TABLE D: TEAM PROPOSAL OF IMPROVEMENTS**

Item <sup>1</sup>	Description/Action
Develop Adequate Parking	Capacity must be consistent with carrying capacity of the area. Include restrooms and warming area which allows warming for 360° around fire pit.
Develop a Map of the Area	Develop a map with a contour base showing all improvements, designated and groomed routes, destination areas, services, etc. Include information on winter safety, visitor etiquette.
Sign 5.9 Miles of Ungroomed O.S.V. Trails	Sign the trails with reflective markers so they can be followed after dark. Pursue cooperative work agreements with O.S.V. clubs. Coordinate with Tahoe NF on locations where route enters TNF.
Groom 6.7 miles of O.S.V. Trails	Sign with reflective markers. Pursue acquiring grooming capability in conjunction with Tahoe NF and assistance from local O.S.V. groups.
Lodges to Provide Meals	Make personal contact with owners of the three lodges in Lakes Basin to share results of survey.
Develop Additional Restrooms	Reconstruct the restrooms at Frazier Falls so they can be utilized during the winter as well as summer. Pursue cost-share opportunities with California Green Sticker Program.
Sign and Groom 1.9 Miles of Ski Trails	Pursue acquisition of a groomer which can be used behind O.S.V. Explore cooperative means for purchasing groomer, accomplishing grooming, and signing.
Sign 3.9 Miles of Ski Trails	Pursue signing of the designated trails through cooperative agreements with skiers and local businesses.
Construct and Sign 1.2 Miles of Ski Trails	Would provide a loop route for skiers. Construction would consist primarily of clearing vegetation. Explore cooperative agreements for accomplishing.
Designate 5.7 Miles of Skier Only Trails	This would provide area where skiers can enjoy the solitude of the area without travelling lengthy distances. (Mileage is included in the three preceeding items)

<sup>1</sup> Refer to Map 1 for specific locations

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## SUMMARY AND CONCLUSIONS

The objective of the study was to develop an alternative which would provide winter visitors to the Lakes Basin area the opportunity to have a successful and enjoyable recreation experience. To provide the appropriate focus for this project it was necessary to develop detailed information about why people come to the area, what facilities they use, and what facilities they want. The information collected provided the basis for development of a management philosophy which insured the focus on improvements and investments in the area would be consistent with visitor expectations.

This section consists of five parts: Summary of Procedures and Findings, Conclusions, Discussion and Implications, Recommendations, and Monitoring.

### SUMMARY OF PROCEDURES AND FINDINGS

A survey was conducted to obtain information from Lakes Basin area winter visitors about their preferences and activities, and a team was formed to develop a proposal for implementation based on the survey information. Questionnaires were handed out at the Graeagle parking area February 11, 1990 and distributed to members of O.S.V. and cross-country groups, and local businesses that receive indirect benefits from visitors using the area. Fifty questionnaires each were provided to O.S.V. and cross-country groups, and 15 to local business during January and February of 1990. Data were entered into a data base and summary tables generated. The summaries were studied to determine which user preferences and activities were important to the majority of the Lakes Basin visitors. This information provided insights that were important in the consideration of facilities for the area.

Findings revealed that 97 percent of the people surveyed had visited the area before and the majority of the visitors wanted only limited changes in facilities and the way the area is currently managed. There were four major attractions for visitors: scenic quality; lack of crowds; good snow conditions; and a wide variety of terrain. All of the existing facilities are being used with the majority of use occurring on snow covered roads and trails and parking at the end of the road. The six most preferred facilities were: better parking, a map of the area, signed ungroomed O.S.V. trails, groomed O.S.V. trails, meals at lodges, and additional restrooms.

Preferred activities were: enjoying the scenery, using over-the-snow vehicles, snow playing, and cross-country skiing.

The team then developed a preferred proposal for implementation which addressed the issues and ideas gathered with the survey. Table D and Map 1 display the elements of the proposal.



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restrooms.

## **CONCLUSIONS**

Preferred activities were: enjoying the scenery, using over-the-snow vehicles, snow playing, and cross-country skiing.

The team then developed a preferred proposal for implementation which addressed the issues and ideas gathered with the survey. Table D and Map 1 display the elements of the proposal.

Within the limitations of this study and based on the findings and interaction of the Team, the following conclusions can be made.

This process is worthwhile as a guide for developing priorities for investment in facilities. While not statistically valid as a survey, it provides insights into visitor preferences.

## **DISCUSSION AND IMPLICATIONS**

The preferred activities are compatible with, and reinforced by, facility preferences. Creation of a well designed parking area, signing of O.S.V. routes, grooming selected O.S.V. routes, adding and improving restrooms, developing a winter activities map, and creating groomed ski trails would provide the visitor with the opportunity to have a quality experience when visiting the Lakes Basin area.

All proposed improvements and activities are consistent with the Recreation Opportunity Spectrum (ROS) classes for the areas (Map 2 and Appendix C), and with the Management Area Direction in the Land Management Plan.

## **RECOMMENDATIONS**

This study contributes to the body of knowledge necessary to understand the preferences of winter visitors to the Lakes Basin area. It may help other recreation administrators cope with development and management issues.

This study will be a worthwhile contribution if it is used as a tool for future management of the area. It can be the starting point for improving management efficiency of available resources and improving visitor enjoyment, while maintaining the natural resource values which the visitors cherish in the area.

1. This study is recommended as a basic management philosophy to be followed and built upon for winter recreation management of the Lakes Basin area on the Plumas National Forest.
2. The Lakes Basin area should be managed in a way which does not place unnecessary restrictions on winter visitors.

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6. Contacts should be made with lodge owners in the area to share the results of this study.
  7. Managers should pursue acquiring California Green Sticker funds for development and maintenance of the parking area and support facilities, and to groom the O.S.V. routes identified by this study.
  8. Frazier Falls restrooms need to be reconstructed so they can be used during the winter. Pursue the shared funding concept with California Green Sticker program.

**MONITORING** Evaluate the quality of visitor satisfaction by on-site contacts with individuals using O.S.V.'s and cross-country skiing. If conflicts occur, reevaluate the recommendations made in this study.

Maintain contact with the Tahoe National Forest to insure activities in Lakes Basin are compatible with those on adjacent Tahoe NF areas.

Facility planning and construction should be monitored to insure that visual quality objectives are maintained and visitor acceptance and use is occurring.

The potential impact of facility development should be monitored to determine if the concept of succession (Schreyer, 1980) applies to winter use in the Lakes Basin area. The concept of succession theorizes that improved facilities may attract visitors with different facility preferences. Management is then required to re-evaluate what facilities provide a quality experience. A follow-up survey should be conducted two to three years after the facilities are in place to assess compatibility.



## MAP 2

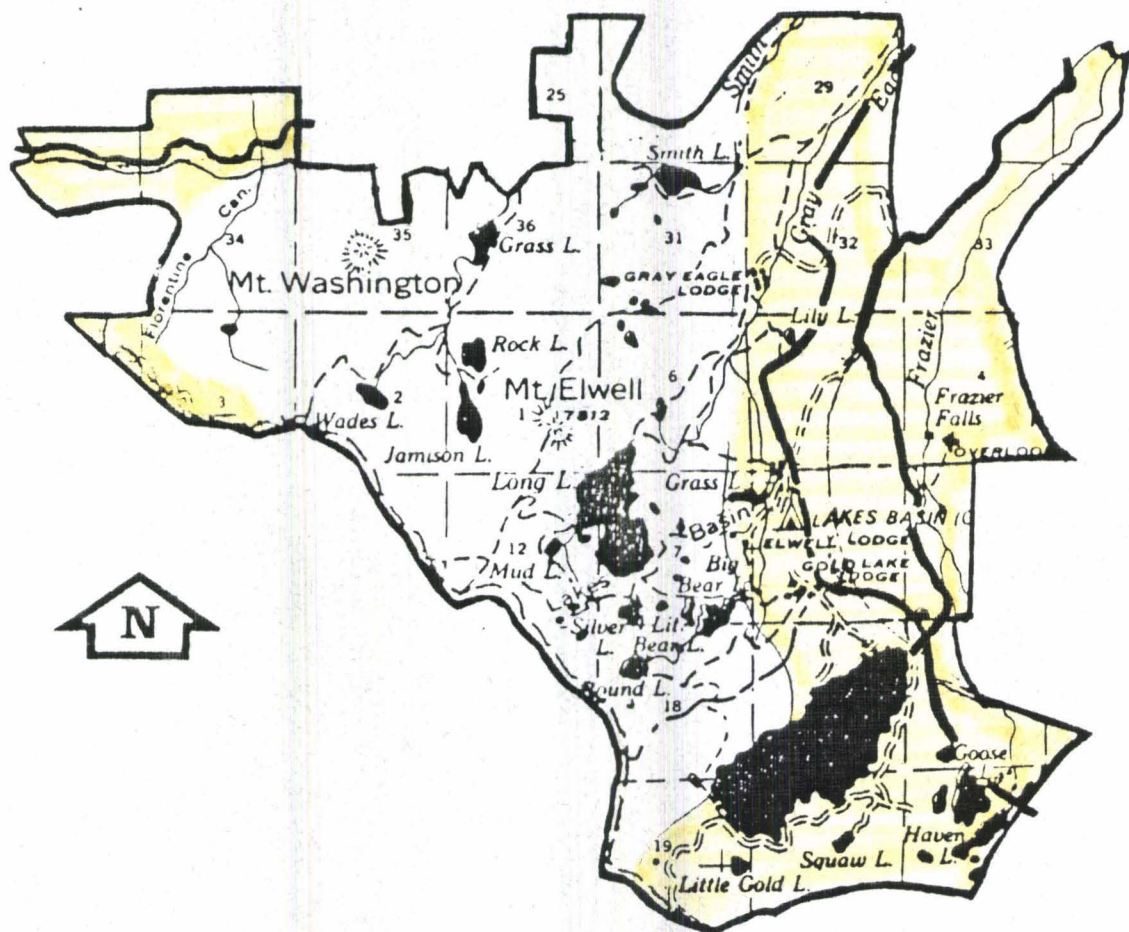
# PLUMAS NATIONAL FOREST

## Land and Resource Management Plan

### Recreation Opportunity Spectrum (ROS)

#### Management Area #35

#### Lakes Basin



**SP**

#### Semi-Primitive

Moderate opportunity for isolation from sights and sounds of people. Natural appearing environment. Low interaction with other users.



#### Roaded Natural

Sights and sounds of people are moderate. Mostly natural appearing as viewed from sensitive roads and trails. Access travel is conventional motorized.

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## **APPENDIX A**

Reference note attached to Survey Form (Appendix B)

Time O.S.V. Enthusiast, Quincy, California), Personal Contact.

Fellow Recreationist:

Please take the time to complete the attached survey. The results of the survey will be used by a group made up of representatives of snow machine clubs, Nordic skiers, and myself. The objective will be to develop a management philosophy for winter activities in the Gold Lake-Lakes Basin Area.

This information will be the basis for a paper I will present as part of a Clemson University project I am involved in. My hope is the essence of the paper will be adopted as management philosophy for the area.

Thanks for taking the time to complete the attached survey.

Bob Hammond



## APPENDIX B

### GOLD LAKE - LAKES BASIN AREA WINTER SURVEY

#### *Clemson Project*

1. Have you visited this area during the winter months in the last five years?  
\_\_\_\_ Yes      \_\_\_\_ No      If yes, about how many times? \_\_\_\_
2. Were you:
  - a. \_\_\_\_ using a snow machine
  - b. \_\_\_\_ cross-country skiing
  - c. \_\_\_\_ snowshoeing
  - d. \_\_\_\_ winter camping
  - e. \_\_\_\_ snow playing/sledding at the end of the road
  - f. \_\_\_\_ ice fishing
  - g. \_\_\_\_ enjoying the view from a passenger window
  - h. \_\_\_\_ other, please explain: \_\_\_\_\_
3. What makes this area attractive to you? \_\_\_\_\_
4. Please indicate which of these facilities you use:
  - a. \_\_\_\_ vault toilets
  - b. \_\_\_\_ end-of-road parking
  - c. \_\_\_\_ groomed trails
  - d. \_\_\_\_ snow covered roads
  - e. \_\_\_\_ snow covered trails
5. Which four activities in this list do you most often participate in or would like to participate in? Using 1 to indicate the most important to 4 to indicate least important, please rank in order of interest to you.
  - a. \_\_\_\_ snow machine use
  - b. \_\_\_\_ cross-country skiing
  - c. \_\_\_\_ snow camping
  - d. \_\_\_\_ viewing scenery
  - e. \_\_\_\_ snow playing/sledding
  - f. \_\_\_\_ ice fishing
  - g. \_\_\_\_ snowshoeing
6. Which of the following would you use if they were available. Using 1 to indicate the most important to 6 to indicate least important, please rank the following choices in order of interest to you.
  - a. \_\_\_\_ groomed snow machine trails
  - b. \_\_\_\_ groomed cross-country ski trails
  - c. \_\_\_\_ additional restroom facilities
  - d. \_\_\_\_ parking area
  - e. \_\_\_\_ signed, ungroomed snow machine trails
  - f. \_\_\_\_ signed, ungroomed cross-country ski trails
  - g. \_\_\_\_ map of area showing trails
  - h. \_\_\_\_ garbage disposal sites
  - i. \_\_\_\_ rustic overnight shelters
  - j. \_\_\_\_ lodges for overnight
  - k. \_\_\_\_ lodges for meals
  - l. \_\_\_\_ Other \_\_\_\_\_
  - m. \_\_\_\_ None of the above
7. Which of these three alternatives do you prefer:
  - a. \_\_\_\_ The area should stay as it is but develop adequate parking.
  - b. \_\_\_\_ The area should have some designated trails for skiers and snow machines with the remainder of the area open to all users.
  - c. \_\_\_\_ The area should have snow machine use limited to clearly identified routes and areas.
  - d. \_\_\_\_ Other \_\_\_\_\_

Thank you for completing the survey. If you would now fold so the return address is visible, affix a postage stamp, and mail by January 30, 1990, I will include your comments in the paper I am preparing.

## APPENDIX C

### RECREATION OPPORTUNITY SPECTRUM (ROS)\*

Recreation Opportunity Spectrum is a system used to divide the Forest into recreational opportunity areas based on area size, distance from roads, and degree of development. Existing and potential recreation activities are identified within each to guide future management. Categories range from "primitive" to "urban."

1. Primitive ROS Class - an essentially unmodified natural environment of 5,000 acres or more that is at least three miles from all motorized use, and that provides significant opportunity for isolation from the sights and sounds of man and a feeling of vastness of scale. Visitors have an opportunity to be part of the natural environment, encounter a high degree of challenge and risk, and use a maximum of outdoor skills.
2. Semi-Primitive Non-motorized ROS Class - a predominantly unmodified natural environment of a size and location that provides a good to moderate opportunity for isolation from sights and sounds of man. The area is typically 2,500 acres or more and at least 1/2 mile from motorized use. It presents opportunity for interaction with the natural environment, moderate challenge and risk, and use of a high degree of outdoor skills.
3. Semi-Primitive Motorized ROS Class - a predominantly unmodified natural environment in a location that provides good to moderate isolation from sights and sounds of man, except for facilities/travel routes for primitive motorized recreation travel. Visitor can experience at least a moderate challenge and risk, and a high degree of skill testing. The area is generally 2,500 acres or larger and not closer than 1/2 mile from better-than-primitive roads.
4. Roaded Natural ROS Class - a predominantly natural environment where resource modification and utilization practices are evident. Evidence of the sights and sounds of man is moderate and in harmony with the natural environment. Opportunities exist for both social interaction and moderate isolation from sights and sounds of man.

\*See: The ROS User's Guide, USDA, Forest Service in the LMP Files.  
1986 ROS Book, USDA, Forest Service

The Roaded Natural class as described in the ROS User's Guide has been divided into two sub-classes, Roaded Natural (RN) and Roaded Modified (RM):

- a. Roaded Natural (RN) is defined as those original Roaded Natural areas that are also coded as Foreground and Sensitivity Level I. These lands lie along the major travel ways and viewsheds. Nearly all developed sites are in this class. Paved roads and hardened sites are common. User interaction is moderate to high at developed sites.
  - b. Roaded Modified (RM) is defined as those Roaded Natural areas that are also coded as Middleground, Background or Unseen, and Sensitivity Level II or III. This is the general resource management area of the Forest, typified by pick-up trucks and many miles of dirt and gravel roads. Other than trails and trailheads, virtually no improvements are present. Users experience low interaction.
5. Rural ROS Class - a substantially modified natural environment. Sights and sounds of man are evident. Renewable resource modification and utilization practices enhance specific recreation activities or provide the protection of vegetative soil cover.
  6. Urban ROS Class - a substantially urbanized environment. Sights and sounds of man predominant.

Urban Class areas on the PNF will be managed according to the Rural Class.



## PHOTOS OF TEAM AT WORK





MAP 1

LAKES BASIN WINTER RECREATION  
TEAM PROPOSAL TO ADDRESS ISSUES

-LEGEND-

- Designated OSV Route
- Groomed OSV Route  
Alternate Route
- (P)  
(P) Parking Area Site  
Alternate Parking Site
- Designated X-C Trail
- Groomed X-C Trail  
Alternate Trail
- X-C Skiers Trail Only
- Designated X-C Area
- Existing Restroom

RRH

6/90

